SECTION VII.—WEATHER AND DATA FOR THE MONTH.

THE WEATHER OF APRIL, 1918.

P. C. DAY, Climatologist and Chief of Division.

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PRESSURE AND WINDS.

The distribution of the mean atmospheric pressure over the United States and Canada, and the prevailing direction of the winds for April, 1918, are graphically shown on Chart VII, while the means at the several stations, with the departures from the normal, are shown in Tables I and III.

April opened with pressure below the normal throughout the country, except on the extreme northern Pacific coast where it was slightly above. Low pressure continued in most districts for several days, except that an area of higher barometer moved in from the far Northwest and gradually overspread the more northern and eastern sections, so that by the middle of the first decade the pressure was generally high from the Mississippi River eastward. Lower pressure followed for a few days, particularly in the more southern districts, after which there was a change to higher pressure in most northern and eastern districts. This continued until near the middle of the month, while in the far Southwest the pressure remained relatively low throughout much of the period. During the second half of the month an occasional HIGH area moved across the Northern and Central States, otherwise pressure was generally below the normal and especially in the more southern districts. The month closed with high pressure in the far Northeast, also from the Mississippi River to the Rocky Mountains and along the northern Pacific coast; elsewhere pressure was generally below the seasonal average.

For the month as a whole the barometric pressure averaged above the normal throughout the northern half of the country, and over the extreme eastern and western portions of Canada. Over all southern districts the average pressure for the month was below the normal, as also in the central districts of Canada. In the middle Plains Region, the far Northwest, over much of New England and the Canadian Maritime Provinces, the positive departures approached 0.10 inch; and the negative departures in the extreme South were nearly as large.

The distribution of the HIGHS and LOWS favored northerly winds in the upper Missouri Valley, the Lakes Region, the Ohio and central Mississippi Valleys, New England, portions of the Middle and South Atlantic States, and along the Pacific coast. In the Gulf States and over much of the southern Plains Region the winds were mostly from southerly points.

TEMPERATURE.

At the beginning of the month generally high temperature for the season prevailed in the East and South, but after a few days decidedly colder weather moved from the Canadian Northwest into practically all eastern and southeastern districts. A gradual warming up followed, but toward the end of the first decade a marked drop in temperature occurred in the upper Lakes Region. A further fall in temperature occurred in most eastern districts during the early part of the second decade, but at the same time there was a considerable warming up in the Rocky Mountains Region and northern Plains States. The temperature continued unusually low in most sections east of the Mississippi until near the middle of the decade, when generally warmer weather set in and continued for several days; but toward the latter part of the decade a sharp drop brought temperatures to considerably below the seasonal average in the South. The next few days gave rather low temperature for the season from the Ohio Valley and Lakes Region eastward and west of the Rocky Mountains, but in most southern districts temperatures were near the seasonal average. About the middle of the last decade colder weather moved in over the Rocky Mountains Region, extended to the Missouri and Mississippi Valleys, and eastward during the next several days. The month closed with somewhat lower temperature over the Great Plains and with seasonable temperature west of the Rocky Mountains.

For April as a whole temperature was slightly above the normal along the Atlantic and Pacific seaboards, in the far Southwest, and generally along the Canadian border from the Great Lakes westward. Over the interior the monthly means were everywhere below the normal, the deficiencies ranging from 3 to 6 degrees per day from the Ohio Valley westward to the middle Plateau Region.

PRECIPITATION.

The month opened with cloudy, unsettled weather in most eastern districts, and during the first few days considerable rain fell in the central and northern Rocky Mountains districts and also from the Mississippi Valley eastward, the fall being rather large in portions of the Ohio Valley and central and east Gulf States. Fair weather followed in practically all eastern sections until shortly after the middle of the first decade, when heavy rains occurred in portions of Texas, Louisiana, and Arkansas, and there were general and beneficial rains over most of the Plains States, extending eastward during the following few days, with some heavy falls in portions of the Gulf and South Atlantic States.

Early in the second decade heavy rains occurred in Pennsylvania, Maryland, and Virginia, and snow fell in the central and northern Appalachian districts, in Ohio and Kentucky and to the northeastward. About the middle of the decade a rain area moved over most of the Plains Region from Texas northward, and also over the Rocky Mountains district. The falls were rather heavy in Texas, Oklahoma, and Arkansas, and generous in the western portions of Kansas and Nebraska, where moisture was needed. Unsettled, showery weather continued in most eastern sections during the remainder of the decade, while west of the Rocky Mountains generally fair weather prevailed.

Widespread rains fell in most eastern districts during the first few days of the third decade, and shortly after its middle heavy rain fell in Texas and southern Louisiana, while snow occurred in the western portions of Nebraska and South Dakota and in Wyoming and Colorado. This general precipitation area moved over the Plains States and to the eastward—except portions of the Atlantic Coast States—with rather large falls in parts of the Florida Peninsula, the central Gulf States, the middle Mississippi Valley, and locally in the northern Great Plains Region. The month closed with rain in portions of the Gulf States and also in the lower Lakes Region and with snow in northern Michigan.

For April as a whole precipitation was heavy to excessive in much of the South Atlantic and Gulf States, and the central and southern portions of the Mississippi Valley, while in most other sections east of the Rocky Mountains it was generally near the normal, except in the southern Plains States, where the fall was as a rule below the seasonal average. In the Rocky Mountains Region and westward the precipitation was generally considerably below the normal, with little or no rain in extreme southwestern Texas and the southern portions of California, Arizona, and New Mexico.

RELATIVE HUMIDITY.

In general the relative humidity conformed to the temperature conditions, and there was a very general increase above the normal in the regions with negative temperature departures. The excess was particularly marked over the southeastern States and in the central Plains Region. From the Dakotas and Nebraska eastward the relative humidity was generally below the normal, and a well-marked deficiency was also observed over the Pacific Coast States.

GENERAL SUMMARY.

Farm work made good progress during the first decade but throughout the remainder of the month was somewhat retarded by frequent rains in most central and eastern districts. The weather of this April was generally too cold and wet for satisfactory progress of corn and cotton, and in a few sections these crops were considerably damaged. On the other hand, cool and moist weather favored winter wheat, and that crop made excellent progress almost everywhere. Other grain crops were likewise benefited. Some early truck crops were damaged in exposed sections by the low temperature, yet as a whole they made good progress during the month.

Meadows and pastures progressed favorably except in the far Southwest, where damage resulted from lack of moisture. Live stock was generally in good condition, although some losses of unprotected young stock occurred in the northern Rocky Mountains district.[1] Frosts and low temperature injured early fruits in portions of the southern Appalachian Region, the Ohio and lower Missouri Valleys, and in the Rocky Mountain and Pacific Coast States, and peaches were found to be badly winterkilled from the central Mississippi Valley northeastward. However, as a whole, the general outlook for fruit at the end of the month was good.

[1] Compare report on stock-warnings by San Francisco forecast district, above, p. 184.

Average accumulated departures for April, 1918.

Districts.	Temperature.			Precipitation.			Cloudiness.		Relative humidity.	
	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure for the current month.	Accumulated departure since Jan. 1.	General mean for the current month.	Departure from the normal.	General mean for the current month.	Departure from the normal.
	° F.	° F.	° F.	In.	In.	In.	0-10.		P. ct.	
New England	44.2	+0.6	− 9.8	2.97	0.00	−3.40	5.4	−0.2	73	−2
Middle Atlantic	50.6	−0.1	− 3.7	4.63	+1.60	−0.50	6.5	+1.2	72	+4
South Atlantic	60.5	−0.8	+ 2.3	5.35	+1.90	−4.20	6.1	+1.9	77	+6
Florida Peninsula	73.8	+0.2	+ 4.3	3.06	+1.10	−2.20	3.4	−0.3	73	−1
East Gulf	62.7	−2.0	+ 3.8	8.32	+4.20	−2.00	6.4	+1.4	76	+4
West Gulf	64.4	−1.4	− 1.0	5.89	+2.40	−2.30	5.3	+0.2	72	−1
Ohio Valley and Tennessee	52.6	−2.0	− 5.4	4.15	+0.60	−2.20	7.0	+1.6	70	+4
Lower Lakes	44.6	−0.5	− 6.7	2.25	−0.10	−0.40	6.1	+0.3	68	−3
Upper Lakes	39.9	−1.1	− 6.9	2.21	−0.20	0.00	5.2	−0.5	69	−2
North Dakota	42.2	+1.5	+15.6	2.49	+0.60	−0.20	5.0	−0.2	63	−4
Upper Mississippi Valley	46.4	−4.1	− 3.8	3.17	+0.20	−2.00	5.7	+0.4	67	−1
Missouri Valley	47.0	−3.4	+ 2.7	2.90	0.00	−1.00	5.5	+0.2	62	−2
Northern slope	39.7	−3.1	+ 4.2	1.86	+0.30	+0.10	6.4	+1.3	66	+6
Middle slope	48.4	−5.3	− 0.9	3.50	+0.30	+0.40	5.6	+0.9	64	+6
Southern slope	61.5	−0.9	+ 5.1	0.55	−0.10	−1.30	3.8	−0.6	45	−8
Southern Plateau	60.5	−0.5	+ 1.4	0.13	−0.20	0.00	2.4	−0.4	34	0
Middle Plateau	46.8	−2.1	+ 1.2	0.34	−0.80	−0.60	3.9	−0.2	46	−2
Northern Plateau	48.4	−0.6	+ 9.3	0.50	−0.80	−1.10	4.5	−0.8	49	−7
North Pacific	49.9	+0.8	+ 5.7	1.20	−2.10	0.00	4.8	−1.4	72	−4
Middle Pacific	55.3	+1.7	+ 3.4	0.83	−1.20	−4.90	2.7	−1.5	62	−8
South Pacific	60.5	+2.4	+ 7.7	0.05	−1.00	+2.90	3.5	−0.3	63	−6

WEATHER CONDITIONS OVER THE NORTH ATLANTIC OCEAN DURING APRIL, 1917.

The data presented are for April, 1917, and comparison and study of the same should be in connection with those appearing in the REVIEW for that month.

Chart IX (XLVI—39) shows for April, 1917, the principal storm tracks and the averages of pressure, air temperature, water surface temperature, and prevailing direction of the wind at 7 a. m. 75th meridian time (Greenwich mean noon). Notes on the locations and courses of the more severe storms of the month are included in the following general summary.

PRESSURE.

The distribution of the average pressure for the month as shown on Chart IX, differed from the normal in several respects. The Atlantic HIGH was about 15 degrees north of its usual position, as the crest of 30.1 inches was near latitude 49°, longitude 21°. A LOW of 29.65 inches was in the vicinity of the Scandinavian Peninsula and a second area of low pressure of less intensity was central near latitude 42°, longitude 47°. The pressure changes from day to day were quite marked in the northern waters, and the means for the three decades of the month differed considerably in some localities, as shown in the following table. This table gives for a number of selected 5-degree squares the mean pressure for each of the three decades of the month, as well as the highest and lowest individual readings reported within the respective squares.